

**§ 34.15–35**

shall be marked as required by § 35.40–7 of this subchapter. Such alarms shall be so arranged as to sound during the 20-second delay period prior to the discharge of carbon dioxide into the space, and the alarm shall depend on no source of power other than the carbon dioxide.

**§ 34.15–35 Enclosure openings—T/ALL.**

(a) Except for cargo spaces, the operation of the carbon dioxide system shall automatically shut down any mechanical ventilation to that space. This will not be required where the carbon dioxide system is a secondary system in addition to another approved primary system protecting the space.

(b) Where natural ventilation is provided for spaces protected by a carbon dioxide extinguishing system, provisions shall be made for easily and effectively closing off the ventilation.

(c) Means shall be provided for closing all other openings to the space protected from outside such space. In this respect, relatively tight doors, shutters, or dampers shall be provided for openings in the lower portion of the space. The construction shall be such that openings in the upper portion of the space can be closed off either by permanently installed means or by the use of canvas or other material which is normally carried by the vessel.

**§ 34.15–40 Pressure relief—T/ALL.**

(a) Where necessary, relatively tight compartments such as refrigeration spaces, paint lockers, etc., shall be provided with suitable means for relieving excessive pressure accumulating within the compartment when the carbon dioxide is injected.

**§ 34.15–90 Installations contracted for prior to January 1, 1962—T/ALL.**

(a) Installations contracted for prior to November 19, 1952, shall meet the requirements of this paragraph.

(1) Existing arrangements, materials, and facilities previously approved shall be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alter-

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ations may be made to the same standards as the original installation.

(2) The details of the systems shall be in general agreement with §§ 34.15–5 through 34.15–40 insofar as is reasonable and practicable, with the exception of § 34.15–5(d)(1) through (3) covering spaces other than cargo spaces, which systems may be installed in accordance with paragraphs (a) (4) through (7) of this section.

(3) For cargo tanks at least one pound of carbon dioxide shall be available for each 30 cubic feet of the largest cargo tank. The discharge of the required amount of carbon dioxide shall be complete within 5 minutes.

(4) In boiler rooms, the bilges shall be protected by a system discharging principally below the floor plates. Perforated pipe may be used in lieu of discharge nozzles for such systems. The number of pounds of carbon dioxide shall be equal to the gross volume of the boiler room taken to the top of the boilers divided by 36. In the event of an elevated boiler room which drains to the machinery space, the system shall be installed in the engine room bilge and the gross volume shall be taken to the flat on which the boilers are installed.

(5) In machinery spaces where main propulsion internal combustion machinery is installed, the number of pounds of carbon dioxide required shall be equal to the gross volume of the space taken to the underside of the deck forming the hatch opening divided by 22.

(6) In miscellaneous spaces other than cargo or main machinery spaces the number of pounds of carbon dioxide required shall be equal to the gross volume of the space divided by 22.

(7) Branch lines to the various spaces other than cargo and similar spaces shall be as noted in Table 34.15–90(a)(7). This table is based on cylinders having discharge outlets and siphon tubes of 3/8-inch diameter.

TABLE 34.15–90(a)(7)

Number of cylinders		Nominal pipe size, inches
Over	Not over	
	2	1/2-standard.
2	4	3/4-standard.
4	6	1-extra heavy.
6	12	1 1/4-extra heavy.